

WHAT IS CLAIMED IS:

1. A method for reducing viral budding from a mammalian cell infected by an enveloped virus, comprising contacting said mammalian cell with a sufficient amount of an antibody that binds a TSG101 protein.

5 2. The method of claim 1, wherein said antibody binds the N-terminal or C-terminal region of said TSG101 protein.

3. The method of claim 2, wherein said mammalian cell is a human cell.

4. The method of claim 3, wherein said antibody binds an epitope comprised in the amino acid region selected from the group consisting of VRETVNVITLYKDLKPVL (SEQ
10 ID NO:2) and QLRALMQKARKTAGLSPLY (SEQ ID NO:3).

5. The method of claim 4, wherein said enveloped virus is selected from the group consisting of human immunodeficiency virus type I (HIV-I), human immunodeficiency virus type II (HIV-II), Marburg virus, and Ebola virus.

6. The method of any one of claims 1-5, wherein said antibody is a monoclonal
15 antibody.

7. A method for treating infection by an enveloped virus in a mammal, comprising administering to said mammal a therapeutically effective amount of an antibody that binds a TSG101 protein.

8. The method of claim 7, wherein said antibody binds the N-terminal or C-terminal
20 region of said TSG101 protein.

9. The method of claim 8, wherein said mammal is a human.

10. The method of claim 9, wherein said antibody binds an epitope comprised in the amino acid region selected from the group consisting of VRETVNVITLYKDLKPVL (SEQ ID NO:2) and QLRALMQKARKTAGLSPLY (SEQ ID NO:3).

25 11. The method of claim 10, wherein said enveloped virus is selected from the group consisting of human immunodeficiency virus type I (HIV-I), human immunodeficiency virus type II (HIV-II), Marburg virus, and Ebola virus.

12. The method of any one of claims 7-11, wherein said antibody is a monoclonal antibody.

13. The method of claim 7, further comprising administering to said mammal a therapeutically effective amount of one or more other therapeutic agents.

5 14. A method for delivering a therapeutic molecule to a mammalian cell infected by an enveloped virus, comprising contacting said mammalian cell with an antibody conjugate, said antibody conjugate comprising an antibody that binds a TSG101 protein conjugated with said therapeutic molecule.

10 15. The method of claim 14, wherein said antibody binds the N-terminal or C-terminal region of said TSG101 protein.

16. The method of claim 15, wherein said mammalian cell is a human cell.

17. The method of claim 16, wherein said antibody binds an epitope comprised in the amino acid region selected from the group consisting of VRETVNVITLYKDLKPVL (SEQ ID NO:2) and QLRALMQKARKTAGLSLDLY (SEQ ID NO:3).

15 18. The method of claim 17, wherein said enveloped virus is selected from the group consisting of human immunodeficiency virus type I (HIV-I), human immunodeficiency virus type II (HIV-II), Marburg virus, and Ebola virus.

19. The method of any one of claims 14-18, wherein said antibody is a monoclonal antibody.

20 20. A method for treating infection by an enveloped virus in a mammal, comprising administering to said mammal a therapeutically effective amount of an antibody conjugate, said antibody conjugate comprising an antibody that binds a TSG101 protein conjugated with a therapeutic agent.

25 21. The method of claim 20, wherein said antibody binds the N-terminal or C-terminal region of said TSG101 protein.

22. The method of claim 21, wherein said mammal is a human.

23. The method of claim 22, wherein said antibody binds an epitope comprised in the amino acid region selected from the group consisting of VRETVNVITLYKDLKPVL (SEQ ID NO:2) and QLRALMQKARKTAGLSLDLY (SEQ ID NO:3).

24. The method of claim 23, wherein said enveloped virus is selected from the group consisting of human immunodeficiency virus type I (HIV-I), human immunodeficiency virus type II (HIV-II), Marburg virus, and Ebola virus.

5 25. The method of any one of claims 20-24, wherein said antibody is a monoclonal antibody.

26. The method of claim 20, further comprising administering to said mammal a therapeutically effective amount of one or more other therapeutic agents.

27. A method for identifying a mammalian cell infected by an enveloped virus, comprising

10 (a) contacting cells of a mammal with an antibody conjugate, said antibody conjugate comprising an antibody that binds a TSG101 protein conjugated with a label; and

(b) detecting a cell having said label attached, thereby identifying said cell infected by said enveloped virus.

15 28. The method of claim 27, wherein said antibody binds the N-terminal or C-terminal region of said TSG101 protein.

29. The method of claim 28, wherein said mammal is a human, and wherein said antibody binds an epitope comprised in the amino acid region selected from the group consisting of VRETVNVITLYKDLKPVL (SEQ ID NO:2) and QLRALMQKARKTAGLSLDLY (SEQ ID NO:3).

20 30. The method of claim 29, wherein said enveloped virus is selected from the group consisting of human immunodeficiency virus type I (HIV-I), human immunodeficiency virus type II (HIV-II), Marburg virus, and Ebola virus.

31. The method of any one of claims 27-30, wherein said antibody is a monoclonal antibody.

25 32. The method of claim 30, wherein said label is fluorescence label, and wherein said cell having said label attached is detected using a fluorescence activated cell sorter.

33. A method for *ex vivo* removal of cells infected by an enveloped virus from a fluid derived from a mammal, comprising

(a) incubating said fluid with a sufficient amount of a TSG101 antibody that binds a TSG101 protein; and

(b) removing cells bound by said TSG101 antibody from said fluid.

34. The method of claim 33, wherein said antibody binds the N-terminal or C-terminal region of said TSG101 protein.

35. The method of claim 34, wherein said fluid is blood or serum.

36. The method of claim 34 or 35, wherein said mammal is a human.

37. The method of claim 36, wherein said TSG101 antibody binds an epitope comprised in the amino acid region selected from the group consisting of VRETQNVITLYKDLKPVL (SEQ ID NO:2) and QLRALMQKARKTAGLSPLY (SEQ ID NO:3).

38. The method of claim 37, wherein said enveloped virus is selected from the group consisting of human immunodeficiency virus type I (HIV-I), human immunodeficiency virus type II (HIV-II), Marburg virus, and Ebola virus.

39. The method of claim 37, wherein said TSG101 antibody is a monoclonal antibody.

40. The method of claim 34 or 35, wherein said cells bound by said TSG101 antibody are removed using a column comprising an antibody that binds said TSG101 antibody.

41. A method for treating or preventing infection by an enveloped virus in a mammal, comprising administering to said mammal a therapeutically or prophylactically sufficient amount of a vaccine composition, wherein said vaccine composition comprises a polypeptide comprising a TSG101 protein.

42. The method of claim 41, wherein said polypeptide comprises an N-terminal or C-terminal region of said TSG101 protein.

43. The method of claim 42, wherein said mammal is a human.

44. The method of claim 43, wherein said polypeptide comprises amino acid sequence selected from the group consisting of VRETQNVITLYKDLKPVL (SEQ ID

NO:2) and QLRALMQKARKTAGLSDLY (SEQ ID NO:3), or a fragment of at least 5 amino acids thereof.

45. The method of claim 44, wherein said enveloped virus is selected from the group consisting of human immunodeficiency virus type I (HIV-I), human immunodeficiency virus type II (HIV-II), Marburg virus, and Ebola virus.

46. A method for treating or preventing infection by an enveloped virus in a mammal, comprising administering to said mammal a therapeutically or prophylactically sufficient amount of a DNA vaccine composition, wherein said DNA vaccine composition comprises a polynucleotide molecule encoding a polypeptide comprising a fragment of a TSG101 protein.

47. The method of claim 46, wherein said polynucleotide molecule encoding a polypeptide comprising an N-terminal or C-terminal region of said TSG101 protein.

48. The method of claim 47, wherein said mammal is a human.

49. The method of claim 48, wherein said polypeptide comprises amino acid sequence selected from the group consisting of VRETVNVITLYKDLKPVL (SEQ ID NO:2) and QLRALMQKARKTAGLSDLY (SEQ ID NO:3), or a fragment of at least 5 amino acids thereof.

50. The method of claim 49, wherein said enveloped virus is selected from the group consisting of human immunodeficiency virus type I (HIV-I), human immunodeficiencyvirus type II (HIV-II), Marburg virus, and Ebola virus.